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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,424	09/29/2000	Mark N. Wegman	YOR920000466US1	5710

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EXAMINER	
TRUONG, LECHI	

ART UNIT	PAPER NUMBER
2126	10

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N . 09/676,424	Applicant(s) WEGMAN ET AL.	
	Examiner LeChi Truong	Art Unit 2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2000*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,11-13 and 18-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,11-13 and 18-20* is/are rejected.

7)☒ Claim(s) *3-10, 14-17, 21-25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 3-10, 14-17, 21-25 are objected.

2. Claims 1-2, 11-13, 18-20 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims **1,2** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibe et al (US. Patent 6,437,804).

4. **As to claim 1**, Ibe teaches the invention substantially as claimed including a communication graph (graph, col 2, ln 35-68/col 6, ln 1-46), a task (network devices, col 2,l n 35-67/ col 4, col 31, ln 23-67), nodes (node, col 2, ln 35-67col 5,l n 64-67 to col 6, ln 1-46), edges (edges, col 2, ln 35-67col 5,l n 64-67 to col 6, ln 1-46), the edges are being weighed (edges be assigned a weigh, col 6, ln 35-65), a min cut solution (an optimally partitioned graph, col 9,ln 1-35/ the partition scheme, col 2, ln 25-67 to col 3, ln 1-45/ col 5, ln 1-10/col 9, ln 1-67), placing task components responsive to said min cut solutions (if the weigh of every cluster lies within the range defined , the clusters become the domains, col 13, ln 7-23/ CP; 14, LN 30-43). Ibe does not explicit teach identify dominant edge. However, Ibe teaches identify dominant edge (the suppernode is identified since the weigh of clusters again are determined if the weight of every cluster

lies within the range defined, col 13, ln 7-40/ ln 50-67/combining the nodes into a number of control groups which number is the same as the number of domains, col 2, ln 55-60), each cluster node can be identify based on the weigh of node but the weigh can be assigned to the edge so the each cluster node can be identify to place into the domain based on the weigh of edges(col 2, ln 15-24/col 6, ln 40-46). It would have been obvious to one of the ordinary skill in the art at time invention was made to apply the teaching of Ide because Ide's "the suppernode is identified since the weigh of clusters again are determined if the weight of every cluster lies within the range defined" would provide efficient distribution and use of nodes for an initial assignment of partitions, for recovery from failure of a control agent and would minimize the communication flow.

5. **As to claim 2**, Ibe teaches terminal nodes (node, col 2, ln 35-67col 5,l n 64-67 to col 6, ln 1-46), task components (network devices, col 2,l n 35-67/ col 4, col 31, ln 23-67), independent nets (a supernode/ cluster, col 8,l n 1-67), a plurality of terminal nodes (set of nodes, col 8,l n 1-45).

6. Claims **11- 13, 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibe et al (US. Patent 6,437,804) in view of Blainey (Loop Allocation for Optimizing Compliler).

7. **As to claim 11,** it is an apparatus claim of claim 1; therefore, it is rejected for the same reason as claim1 above. In additional , Ibe does not explicit teach a computer program as a node. However, Blainey teaches a computer program as a node (each node

in the data graph being associated with one or more statements in the source code segment, page 5, ln 15-20).

8. It would have been obvious to on of the ordinary skill in the art at the time invention was made to combine the teaching of Ibe and Blainey because Blainey's "each node in the data graph being associated with one or more statements in the source code segment" would optimize the distributed code and then to fuse the code after optimization.

9. **As to claim 12,** Ibe teaches independent nets (a supernode/ cluster, col 8,l n 1-67), a plurality of said terminal codes (set of nodes, col 8,l n 1-45).

10. **As to claim 13**, Ibe teaches collapsing identified dominant edges (collapsing the nodes and edges, col 2, ln 14-22).

11. **As to claims 18-20**, they are apparatus claims of claim 11-13; therefore, they are rejected for the same reasons as claims 11-13.

Allowable Subject Matter

12. Claims 3-10, 14-17, 21-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to the argument

13. Applicant amendment filed on 11/25/2003 has been considered but they are not persuasive.

14. In the remarks, applicant argued in substance that (1) "Neither can the applicants find any mention or suggestion in Ibe et al of dominant edges, much less an indication of how to find dominant edges in edge weight graph such that dominant edges are not present in the minimum cut. (2) " This is not assigning weights to the edges".

15. Examiner respectfully traversed Applicant' s remarks:

As to the point (1), Ibe teaches the suppernode is identified since the weigh of clusters again are determined if the weight of every cluster lies within the range defined, col 13, ln 7-40/ ln 50-67/combining the nodes into a number of control groups which number is the same as the number of domains, col 2, ln 55-60), each cluster node can be identify based on the weigh of node but the weigh can be assigned to the edge so the each cluster node can be identify to place into the domain based on the weigh of edges(col 2, ln 15-24/col 6, ln 40-46).

As to the point (2), Ibe teaches edges or node be assigned a weigh (col 6, ln 35-65).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (703) 305 5312. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR of Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

LeChi Truong

March 10, 2004

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